

# EXHIBIT A

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TENNESSEE  
AT KNOXVILLE

GREG ADKISSON, ET AL,	)	
	)	
PLAINTIFFS,	)	
	)	
VS.	)	NO. 3:13-CV-505-TAV-HBG
	)	
JACOBS ENGINEERING GROUP, INC.,	)	
	)	
DEFENDANT.	)	
KEVIN THOMPSON, ET AL,	)	
	)	
PLAINTIFFS,	)	
	)	
VS.	)	NO. 3:13-CV-666-TAV-HBG
	)	
JACOBS ENGINEERING GROUP, INC.,	)	
	)	
DEFENDANT.	)	
JOE CUNNINGHAM, ET AL,	)	
	)	
PLAINTIFFS,	)	
	)	
VS.	)	NO. 3:14-CV-20-TAV-HBG
	)	
JACOBS ENGINEERING GROUP, INC.,	)	
	)	
DEFENDANT.	)	
CRAIG WILKINSON, ET AL,	)	
	)	
PLAINTIFFS,	)	
	)	
VS.	)	NO. 3:15-CV-274-TAV-HBG
	)	
JACOBS ENGINEERING GROUP, INC.,	)	
	)	
DEFENDANT.	)	

1 ANGIE SHELTON, as wife and next of )  
 2 kin on behalf of Mike Shelton, )  
 3 et al, )  
 4 PLAINTIFFS, )  
 5 VS. ) NO. 3:15-CV-420-TAV-HBG  
 6 JACOBS ENGINEERING GROUP, INC., )  
 7 DEFENDANT. )  
 8 JOHNNY CHURCH, )  
 9 PLAINTIFF, )  
 10 VS. ) NO. 3:15-CV-460-TAV-HBG  
 11 JACOBS ENGINEERING GROUP, INC., )  
 12 DEFENDANT. )  
 13 DONALD R. VANGUILDER, JR., )  
 14 PLAINTIFF, )  
 15 VS. ) NO. 3:15-CV-462-TAV-HBG  
 16 JACOBS ENGINEERING GROUP, INC., )  
 17 DEFENDANT. )  
 18 BILL ROSE, )  
 19 PLAINTIFF, )  
 20 VS. ) NO. 3:13-CV-17-TAV-HBG  
 21 JACOBS ENGINEERING GROUP, INC., )  
 22 DEFENDANT. )  
 23 PAUL RANDY FARROW, )  
 24 )  
 25 )

1  
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1 PLAINTIFF, )  
 2 VS. ) NO. 3:16-CV-0000636-TAV-  
 3 ) HBG  
 4 JACOBS ENGINEERING GROUP, )  
 5 DEFENDANT. )  
 6 JUDY IVENS, as sister and next of )  
 7 kin, on behalf of JEAN NANCE, )  
 8 deceased, )  
 9 PLAINTIFF, )  
 10 VS. ) NO. 3:16-CV-00635-TAV-HBG  
 11 JACOBS ENGINEERING GROUP, )  
 12 DEFENDANT. )  
 13  
 14  
 15  
 16  
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 24  
 25

VIDEOTAPED DEPOSITION OF DR. PAUL TERRY  
 August 24, 2018

PEGGY F. MCCRORY, LCR #532  
 Registered Professional Reporter  
 Knoxville, TN 37901

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1 Q I know -- I know you didn't.  
 2 A Just get a little --  
 3 MR. DAVIS: Just wait. Let him ask his  
 4 questions and you answer.  
 5 BY MR. SANDERS:  
 6 Q Do you know how many of the plaintiffs had  
 7 worked in construction after the Kingston work?  
 8 A No.  
 9 Q Do you know when the Kingston work was;  
 10 what were the -- the bracketed dates for when work started and  
 11 when work was completed?  
 12 A Exact dates, no.  
 13 Q All right. Do you have a sense of how  
 14 long people worked on the Kingston site that are plaintiffs?  
 15 A So specific to plaintiffs. Not specific  
 16 to all workers who were there.  
 17 Q Right.  
 18 A I don't know how they were different from  
 19 the normal -- what's been reported in the general news as to how  
 20 long people worked. I don't know if there's -- I don't know of  
 21 any differences, no.  
 22 Q Okay. But do you -- then let me ask the  
 23 question I think you do know the answer to. How long did work  
 24 go on on the Kingston site as a result of this spill and  
 25 cleanup?

1 A I'm under the impression it went on for a  
 2 year or two. But I don't know the exact number of months.  
 3 Q Okay. Okay.  
 4 A Sometime -- no. Never mind.  
 5 Q All right. I want to -- to take you now  
 6 to the -- to a declaration or report that you did in October of  
 7 last year. Less than a year ago.  
 8 A Yeah.  
 9 MR. SANDERS: And we'll mark that Exhibit  
 10 Seven.  
 11 MR. DAVIS: Are you counting the  
 12 late-filed exhibit in here?  
 13 MR. ISAAC SANDERS: Yeah. I think that  
 14 would be the next one unless it --  
 15 (EXHIBIT NO. 7 WAS OMITTED.)  
 16 MR. SANDERS: Okay. We'll make this one  
 17 Eight, then.  
 18 MR. DAVIS: If we have Seven. will be a  
 19 place for it.  
 20 (EXHIBIT NO. 8 WAS FILED.)  
 21 BY MR. SANDERS:  
 22 Q I want to give you a chance to look at  
 23 this. While it is -- it is -- Exhibit Eight is entitled a  
 24 supplemental disclosure of Dr. Paul Terry, on the last page it  
 25 is signed by you apparently.

1 MR. DAVIS: Objection to the comment.  
 2 MR. SANDERS: Geez --  
 3 MR. DAVIS: You accusing someone of  
 4 forgery, is that what you're doing?  
 5 MR. SANDERS: No. I'm going to ask him  
 6 first did you sign that.  
 7 MR. DAVIS: Okay. That's a good question.  
 8 BY MR. SANDERS:  
 9 Q Did you sign that?  
 10 A Yes.  
 11 Q So -- and you dated it. That's your  
 12 handwriting, too, the date?  
 13 A It looks like my handwriting. I -- I  
 14 can't say it's not.  
 15 Q All right. All right. And you note that  
 16 it's signed under penalty of perjury.  
 17 A Yes.  
 18 Q Okay. Did you author this or did someone  
 19 else author this and present it to you for your review and  
 20 signature?  
 21 A I did not type it. I did not type it  
 22 myself.  
 23 Q Okay. That's not my question. Who's the  
 24 author of this? You or someone else, or do you remember?  
 25 A I don't remember. But I do remember that

1 I discussed this with the lawyer.  
 2 Q Okay. And the lawyer, when you say it in  
 3 this -- as I understand it, is Mr. Scott.  
 4 A Well, at this point in time I can't say  
 5 that with certainty.  
 6 Q Okay. All right.  
 7 A Because now we're getting closer to the  
 8 present.  
 9 Q Okay.  
 10 A And --  
 11 Q And there are more lawyers.  
 12 A There's more lawyers.  
 13 Q All right. I gotcha.  
 14 Doctor Terry, we had some discussion,  
 15 and -- and I want to make sure I'm giving you every opportunity  
 16 here to -- to compare and contrast. Go back to Exhibit Two.  
 17 A Yes.  
 18 Q And there's a description in Exhibit Two  
 19 that refers to the control group, as you define it, in July of  
 20 2017.  
 21 A Yes.  
 22 Q Would you -- would you read that for me?  
 23 A What paragraph?  
 24 Q The paragraph that defines the -- the --  
 25 the comparison group or the control group, the comparable.

1 A In Exhibit Two.  
 2 Q Two. Which is your July report, 2017.  
 3 A Bullet point number --  
 4 Q Look at number one.  
 5 A Yeah.  
 6 Q Well, I'm going to read it to you.  
 7 "Doctor Terry's opinions in this case  
 8 pertain to the statistical analysis of data related to various  
 9 health conditions identified with the subject workers that  
 10 helped to remediate the Kingston ash spill. He will provide  
 11 testimony as to how the odds ratios in this matter indicate that  
 12 the higher incidence of these health problems in the workers can  
 13 be linked statistically to their exposure to fly ash" -- and  
 14 here's the part I want you to concentrate on -- "by comparing  
 15 the workers' experience of health problems with those of certain  
 16 other population groups including, but not limited to, various  
 17 local and regional populations."  
 18 A Uh-huh.  
 19 Q Is that -- did I read that accurately?  
 20 A Yes.  
 21 Q Okay. Now, in that group, literally,  
 22 would be people who live in proximity to the Kingston plant,  
 23 right?  
 24 A Yes.  
 25 Q And I want to contrast that with what you

1 A Yes, sir.  
 2 Q -- to the plaintiff workers, right?  
 3 A Yes, sir.  
 4 Q Fair enough?  
 5 A Yes, sir.  
 6 Q How many of those did you have by  
 7 October 27th?  
 8 A I don't know.  
 9 Q Okay. Did you know by October 27th you  
 10 weren't going to be able to do an epidemiological study?  
 11 A I was starting to -- I don't know when --  
 12 when the realization that I was not getting data that would  
 13 support a fair and publishable study. And I can't tell you  
 14 exactly when it became clear to me. But as -- for example, as  
 15 we -- as we were getting more reports in, at some point they  
 16 slowed down. At some point, regardless of the study design,  
 17 which was changing, it didn't matter. We were not getting  
 18 enough numbers to do a reliable analysis.  
 19 Q Okay. Let me -- let me interrupt you  
 20 there a second. And I want to focus on this time period you're  
 21 talking about.  
 22 A Yes.  
 23 Q That we're talking about a time period  
 24 between July 14, 2017 --  
 25 A Yes.

1 say in Exhibit Eight.  
 2 A Uh-huh.  
 3 Q On bullet point one, page one.  
 4 A Uh-huh.  
 5 Q You say, "I am using a control group  
 6 persons who have not been exposed to fly ash or fly ash  
 7 constituents."  
 8 Is that accurate, doctor?  
 9 A It is accurate if you take into account  
 10 that my case control study at that point was being morphed into  
 11 what I thought would have been better as what's called a case  
 12 cohort study. So we were looking at different designs at this  
 13 point. So these two documents reflect a shifting in how I was  
 14 planning to do the analysis.  
 15 Q Do you see that anywhere in this report?  
 16 A That I am changing my --  
 17 Q That it's morphing? That it's changing?  
 18 A No.  
 19 Q Had you gotten -- how many more  
 20 questionnaires from your control group, as we -- as you and I  
 21 have defined it, and I'm using that word loosely and you are  
 22 too.  
 23 A Yes, sir. Yes, sir.  
 24 Q But to describe the people you're going to  
 25 compare --

1 Q -- and October 27, 2017, which is less  
 2 than a year ago, now. And your memory ought to be a little bit  
 3 better, right?  
 4 MR. DAVIS: Objection. You may answer.  
 5 THE WITNESS: My memory is what it is, and  
 6 I'm going to do the best I can.  
 7 BY MR. SANDERS:  
 8 Q Okay. All right. So when -- strike that.  
 9 You've already told me your best  
 10 recollection of what you had by mid July of 2017 in terms of  
 11 questionnaires --  
 12 A I --  
 13 Q -- and dates.  
 14 A I told you the best that I could.  
 15 Q Did you get any more data --  
 16 A Possible.  
 17 Q -- after July --  
 18 A Possible.  
 19 MR. DAVIS: Let him finish his question.  
 20 BY MR. SANDERS:  
 21 Q -- after July 14, 2017, and before October  
 22 27, 2017?  
 23 A Possibly. I don't know for sure.  
 24 Q Well, was it much?  
 25 A It wasn't too much, no. It was concerning

1 that there wasn't enough to do the work that we had thought we  
2 could do.

3 Q All right. Did you report that concern to  
4 the lawyers?

5 A I did.

6 Q When?

7 A Around that time.

8 Q Well, was it before or after you made this  
9 sworn declaration?

10 A I don't know.

11 Q You don't know?

12 A No, sir. Can I -- can I -- can I qualify  
13 that a little bit?

14 MR. DAVIS: You can -- if it completes  
15 your answer, please do.

16 THE WITNESS: It's not like one day I woke  
17 up and said this is not going to work. It's more  
18 like a gradual -- a gradual sense that it's not going  
19 to work. And when I came to the more definitive  
20 conclusion that it wasn't going to work, I can't tell  
21 you that. I can tell you it was more recently. But  
22 I can't tell you the exact date that that conclusion  
23 was reached on a more definitive level.

24 BY MR. SANDERS:

25 Q And -- and at some point you informed the

1 Q Had you made an assessment of whether you  
2 had sufficient information in the -- in the plaintiff worker  
3 group data?

4 A Yes. I thought that we could use some  
5 more to be more concrete in our conclusions.

6 Q Well, wait a minute, now. So you had made  
7 an assessment and that you needed more.

8 A I would have liked more, yes.

9 Q Did you tell the lawyers that?

10 A Yes.

11 Q Did you get more?

12 A I -- they -- as mentioned earlier, the  
13 reports came in over the course of months. Many, many months.  
14 And I can't tell you if at the time that I suggested that we did  
15 not have enough or would desire more, I can't tell you that if  
16 that occurred -- you know, when exactly that occurred. And --  
17 and more specifically, I mentioned it more than once.

18 So the first time I mentioned it we  
19 definitely did get more. Second time I mentioned it we probably  
20 got some more. And I don't know at that point. But there was a  
21 point when I mentioned it when we didn't get anymore.

22 Q Okay. I'm going to get quickly above my  
23 pay grade here. But I gather from your testimony and the  
24 context, that the more information you got came in the form of  
25 additions to Excel spread sheets as opposed to hard copies of

1 lawyers on that more definitive level.

2 A Yes.

3 Q How soon after you reached that conclusion  
4 did you tell the lawyers?

5 A I don't know. At what -- I don't know.  
6 In general. I did not reach out to the lawyers so much as  
7 waited for them to reach out to me. So I don't know exactly how  
8 long that interval was.

9 Q Was it weeks?

10 A I don't --

11 Q Days?

12 A I don't know. I -- I don't think days.

13 Q Weeks?

14 A It would be weeks or months.

15 Q Okay. So is it a fair statement that you  
16 were having problems with whether you were going to be able to  
17 complete the epidemiology study that you had intended to do?

18 A Very fair.

19 Q Okay. And that a reason for that was the  
20 lack of data from questionnaires either in control group or the  
21 plaintiffs' group, right?

22 A That is fair.

23 Q And that -- and that was more predominant  
24 in the control group.

25 A That's -- that's true.

1 questionnaires. Is that a fair statement?

2 A No, sir. I believe that additional  
3 information was sent in the form of hard copies.

4 Q Questionnaires?

5 A Questionnaires, yes. Which I assumed  
6 would be included in any updates I received on the Excel spread  
7 sheet.

8 Q And -- and -- so you got questionnaires  
9 after July --

10 A It's possible that I did.

11 Q -- of July of 2017.

12 A It's possible.

13 Q And what happened to those? Where are  
14 they?

15 A I do not -- I did not retain any  
16 questionnaires. I can tell you what I strongly believe here, is  
17 that after they took the questionnaires from my office I did not  
18 receive anymore at that point.

19 Q Okay.

20 A But what date they took it, I don't know.

21 Q Well, I -- maybe I misunderstood you. And  
22 correct me if I'm wrong.

23 A Yes.

24 Q But I thought you testified a few minutes  
25 ago that the -- the data you were relying on in July of 2017 was

1 MR. SANDERS: Sure.  
 2 MR. DAVIS: Okay. Five-minute break.  
 3 THE VIDEOGRAPHER: We're going off the  
 4 record. This is the end of disk one.  
 5 (A recess was had.)  
 6 THE VIDEOGRAPHER: We are back on the  
 7 record. The time is 11:43. This is the beginning of  
 8 disk two.  
 9 BY MR. SANDERS:  
 10 Q Doctor Terry, you and I were talking about  
 11 Exhibit Eight. And specifically we were talking about the  
 12 problems you were having in completing your epidemiological  
 13 study, which is always hard for me to say.  
 14 A Me too.  
 15 Q Good.  
 16 And -- and I read you the sentence on page  
 17 one of Exhibit Eight about the control group as you described it  
 18 there.  
 19 A Yes.  
 20 Q And would you agree with me that that --  
 21 that's a bit different from your description in Exhibit Two when  
 22 you defined --  
 23 A Yes.  
 24 Q -- or described the control group?  
 25 A Yes.

1 Q Was that on purpose? Did -- did you  
 2 change your concept of your control group?  
 3 A I -- I -- I changed my concept of the --  
 4 of the study along the way. I guess it had to be due in part to  
 5 the way that data were being collected. And so I thought it may  
 6 be better to treat this not as a retrospective analysis, but as  
 7 a -- what's called a prospective analysis. Starting with the  
 8 exposure point and going forward in time from there.  
 9 Q But, doctor, on page two, when you  
 10 describe methodology under point two, it's still a retrospective  
 11 observation of historical cohort study, isn't it?  
 12 A Yes, sir. But that -- that's something I  
 13 tell my students all the time. I like to use the word  
 14 "historical" because the word "retrospective" is, unfortunately,  
 15 leads people to think that that is the directionality, the  
 16 directionality of the study, when it's not. It's a  
 17 retrospective in the fact that you are reconstructing a cohort  
 18 based on historical records. I -- I prefer the term "historical  
 19 cohort." But it's actually used anonymously, retrospective  
 20 cohort, versus an historical cohort. They're both used.  
 21 Q Yeah. But I thought you were changing to  
 22 prospective at about this time.  
 23 A Well, it's changing to a prospective  
 24 directionality or forward directionality, which is a cohort. A  
 25 cohort attempts to categorize people according to exposure and

1 then look forward in time, which is what makes it -- now, you  
 2 could do this all retroactively, which is probably why it's  
 3 better to say a retroactive cohort study than a retrospective  
 4 cohort study. But you can retroactively assemble a cohort if --  
 5 if the records are there to do so.  
 6 Q Right. And that was your problem, the  
 7 records weren't there?  
 8 A Well, the records were being estimated by  
 9 this -- by this questionnaire.  
 10 Q Right.  
 11 A And the medical records, yeah.  
 12 Q And you weren't getting what you needed.  
 13 A Not -- not -- I wasn't getting optimal,  
 14 let's say.  
 15 Q All right. Now, the next sentence,  
 16 however --  
 17 A Yes.  
 18 MR. DAVIS: Which --  
 19 MR. SANDERS: After the one we've just  
 20 been talking about. I am using a control group  
 21 that's not been exposed to fly ash or fly ash  
 22 constituents.  
 23 THE WITNESS: Yes.  
 24 BY MR. SANDERS:  
 25 Q We talked about that's different from what

1 you said in July.  
 2 A It certainly is.  
 3 Q The next sentence says, "I have not  
 4 completed my work, as I intended to rely heavily on air  
 5 monitoring data and industrial health information, which Jacobs  
 6 Engineering, Inc. as the safety contractor for TVA was required  
 7 to maintain pursuant to CERCLA."  
 8 Did I read that right?  
 9 A I believe you did.  
 10 Q And you swore to that.  
 11 A Yes, sir.  
 12 Q In October.  
 13 A Yes, sir.  
 14 Q 2017.  
 15 A Yes, sir.  
 16 Q And signed it.  
 17 A Yes, sir.  
 18 Q Well, let me ask you about air monitoring  
 19 data.  
 20 A Yes, sir.  
 21 Q Had you seen any air monitoring data?  
 22 A No, sir.  
 23 Q Don't shake -- and let me finish.  
 24 A I'm sorry.  
 25 Q This is -- this is important.

1 A Oh, I thought you had finished. I'm  
 2 sorry.  
 3 Q That's okay.  
 4 Had you seen any air monitoring data  
 5 whatsoever for the Kingston site prior to October 27, 2017?  
 6 A No, sir.  
 7 Q Okay. And had anyone told you that there  
 8 was air monitoring data that was available?  
 9 A I believe verbally I was told that it was  
 10 possible. I don't think I was promised that data.  
 11 Q Anybody tell you that there was a spread  
 12 sheet, which looks like this, of air monitoring data collected  
 13 by Jacobs during the entire time Jacobs was collecting data --  
 14 air monitoring data on this site?  
 15 MR. DAVIS: Objection. Witness has not  
 16 been shown a spread sheet. Just held up a notebook.  
 17 BY MR. SANDERS:  
 18 Q I don't know if it's going to make any  
 19 difference to show it to you. But I will be glad to show it to  
 20 you.  
 21 A Thank you.  
 22 My best answer is, I don't specifically  
 23 recall ever being shown these. However, I can't -- I can't  
 24 state absolutely that I had not at least been offered the  
 25 opportunity to see that. I -- I don't know --

1 Q Okay. You just don't remember.  
 2 A No, sir.  
 3 Q But whether you were given the opportunity  
 4 or not, you didn't look at any air monitoring data to this day,  
 5 is that right --  
 6 A Except for --  
 7 Q -- other than what I just showed you.  
 8 A I have seen various spread sheets on  
 9 constituents of coal ash but not air monitoring data.  
 10 Q Okay. All right. But I'm -- I'm asking  
 11 now specifically -- and I'll get to this other in a minute.  
 12 A Yes.  
 13 Q We're going to run into it inevitably.  
 14 A Yes, sir.  
 15 Q But I'm talking about air monitoring data.  
 16 A I don't recall ever seeing air monitoring  
 17 data of that type from that, no.  
 18 Q All right. At some point -- and Isaac or  
 19 Gary can help us. At some point you list in the materials that  
 20 you reviewed the On-Scene Coordinator Reports. Do you remember  
 21 looking at those?  
 22 A Could you say that again? What --  
 23 Q Yes. On-Scene Coordinator Reports from  
 24 the Kingston project.  
 25 A "On-scene" meaning on site?

1 Q Yes.  
 2 A Okay. I don't remember --  
 3 Q It may be in the newest report.  
 4 A I don't remember any specific data --  
 5 Q Now, I'm not asking about data right now.  
 6 I'm going to get to data going this way.  
 7 A Sure.  
 8 Q I'm asking about the On-Scene Coordinator  
 9 Reports. And it probably would help me -- there is one that is  
 10 for the time-sensitive phase of the project and the other for  
 11 the non time-sensitive phase.  
 12 MR. DAVIS: Let me just -- let the record  
 13 reflect that we were just handed something that  
 14 appears to be Exhibit Four from the summary judgment  
 15 response of the plaintiffs in the case and not an  
 16 Exhibit Four for this deposition.  
 17 MR. SANDERS: Thank you for that  
 18 clarification.  
 19 MR. DAVIS: And this appears to be Dr.  
 20 Terry's report; is that correct?  
 21 MR. ISAAC SANDERS: The -- the new one.  
 22 MR. DAVIS: Right.  
 23 MR. SANDERS: The new one. And --  
 24 MR. ISAAC SANDERS: (Inaudible.)  
 25 BY MR. SANDERS:

1 Q Is that yours?  
 2 A Yes.  
 3 MR. DAVIS: And also his declaration,  
 4 which is in front.  
 5 BY MR. SANDERS:  
 6 Q And if you look on page 18 of the -- your  
 7 report from -- on page 26 of the document. But 18 on the --  
 8 MR. DAVIS: Eighteen in your report.  
 9 BY MR. SANDERS:  
 10 Q Eighteen of your report. Yes. At the  
 11 bottom there it says "document" -- or page 26 of 139.  
 12 A Page 26 --  
 13 Q Yeah. It's -- it's -- I'm just trying to  
 14 show you where --  
 15 A Oh, yes. Okay. In the corner.  
 16 Q Yeah.  
 17 A Yes.  
 18 Q But the whole point of this is for you to  
 19 look at item eight on page 18.  
 20 A Yes. I see it.  
 21 Q On-Scene Coordinator Report for the  
 22 Time-Critical Removal Action.  
 23 A Yes.  
 24 Q Great.  
 25 So apparently you considered that.



1 A Everything -- yes.  
 2 Q Okay.  
 3 A Apparently I did, yes.  
 4 Q Do -- do you -- do you recall or did you  
 5 notice that there is a section in that On-Scene Coordinator  
 6 Report on air monitoring and a summary of results?  
 7 A At the time I --  
 8 MR. DAVIS: We -- we provided you what he  
 9 was provided from that report. It was an excerpt of  
 10 the report. It -- it was among the documents  
 11 produced.  
 12 MR. SANDERS: Well, if you can help me a  
 13 second, in the stack which you gave me, which is  
 14 hopefully here.  
 15 MR. DAVIS: It may be on the thumb drive.  
 16 And it's identified as an excerpt from the On-Scene  
 17 Coordinator Report.  
 18 MR. SANDERS: And that excerpt concerned  
 19 what?  
 20 MR. DAVIS: Concerns the constituents of  
 21 coal ash.  
 22 MR. SANDERS: Okay. But you didn't  
 23 provide him with a copy -- with the excerpts having  
 24 to do with air monitoring.  
 25 MR. DAVIS: I -- I can tell you we didn't.

1 A Yes. Under --  
 2 Q Okay.  
 3 A Yes. A few assumptions would need to be  
 4 made. But, yes, it -- it is all dependent on the quality and  
 5 relevance of the data.  
 6 MR. DAVIS: You mean for his  
 7 epidemiological study, is that what you're referring  
 8 to?  
 9 MR. SANDERS: Yes, sir.  
 10 THE WITNESS: Yes, sir. Of course, like  
 11 everything else, it depends on the quality of the  
 12 data.  
 13 BY MR. SANDERS:  
 14 Q Then you go on to say, "My information is  
 15 that the air monitoring data was altered, destroyed or otherwise  
 16 rendered unreliable." This is still on page one from Exhibit  
 17 Eight.  
 18 A Yes, sir.  
 19 Q Did I read that correctly?  
 20 A Yes, sir.  
 21 Q From whom did you get that information or  
 22 from where?  
 23 A From plaintiffs' attorney and/or  
 24 attorneys.  
 25 Q Okay.

1 I don't know what he was provided before we got  
 2 involved in the case.  
 3 BY MR. SANDERS:  
 4 Q Okay. Well, let me ask you the question  
 5 directly, doctor.  
 6 A Yes, sir.  
 7 Q Does the conversation among counsel here  
 8 help refresh your recollection of -- of what you may have seen  
 9 from the On-Scene Coordinator Report?  
 10 A No.  
 11 Q Okay. And as you sit here today you can't  
 12 remember ever seeing from the On-Scene Coordinator Reports  
 13 anything about air monitoring and air monitoring results at the  
 14 site.  
 15 A Not to the point where I can recall any --  
 16 any of it.  
 17 Q Okay. Air monitoring results would be  
 18 important, wouldn't they?  
 19 A In theory, yes.  
 20 Q Okay. Well, you say in your declaration.  
 21 "I intended to rely heavily on the air monitoring data," right?  
 22 Didn't you say that?  
 23 A I said that.  
 24 Q Okay. So that's pretty important, isn't  
 25 it?

1 A I can't remember how many may have relayed  
 2 that information to me.  
 3 Q Did they give that to you verbally, orally  
 4 or did they give it to you in writing?  
 5 A Verbally.  
 6 Q Okay.  
 7 A To the best of my recollection.  
 8 Q And verbally, as we're using it here,  
 9 means they talked to you about it.  
 10 A To the best of my recollection, that's the  
 11 way I learned of it.  
 12 Q Right. And you don't remember getting any  
 13 written communication about this information that the air  
 14 monitoring data was altered, destroyed or otherwise rendered  
 15 unreliable.  
 16 A At this point in time I have no  
 17 recollection of ever receiving any written documentation  
 18 regarding that.  
 19 Q All right. What did the lawyers tell you?  
 20 A They told me what -- what's here, I don't  
 21 remember the -- the words. I think this is a reasonable  
 22 representation of what they told me. But I don't remember their  
 23 exact words.  
 24 Q Well, did you ask them how -- how -- how  
 25 is that -- how -- how could they do that?

1 A I probably did.  
 2 Q Do you remember the answer?  
 3 A I don't.  
 4 Q So even now --  
 5 A Even now, I don't.  
 6 Q -- you have no -- you have never looked at  
 7 air monitoring results.  
 8 A No.  
 9 Q From Kingston. I'm sorry.  
 10 A No. Yes. I'm glad you -- because, yes, I  
 11 have looked at air monitoring results.  
 12 Q Okay.  
 13 A But, no, I have not looked at air  
 14 monitoring results from Kingston.  
 15 Q All right. And -- and had you asked for  
 16 them before you were told they were unreliable?  
 17 A I inquired as to their availability.  
 18 Q And what were you told?  
 19 A They're not reliable.  
 20 Q That was your answer. Their answer to  
 21 you.  
 22 A I believe. But you know what, I may have  
 23 asked for it several times before getting that answer. I don't  
 24 remember if it was I asked and they immediately told me that. I  
 25 can't tell you that.

1 Q Okay. I have to ask this --  
 2 A Sure.  
 3 MR. DAVIS: You dropped your mike.  
 4 MR. SANDERS: I saw it. Thanks.  
 5 MR. DAVIS: Only supposed to do that when  
 6 you really go out with a big hit.  
 7 MR. SANDERS: I don't have any of those.  
 8 MR. ISAAC SANDERS: (Inaudible.)  
 9 MR. SANDERS: I didn't -- I didn't need  
 10 confirmation from you.  
 11 BY MR. SANDERS:  
 12 Q The best time guide post we have that --  
 13 that's been somewhat successful for us this morning is the  
 14 July 14th report that you signed and then the October 27 report  
 15 that you signed.  
 16 A Yes.  
 17 Q And a little bit of help from May 1st --  
 18 A Yes.  
 19 Q -- 2017.  
 20 A Yes.  
 21 Q Do you think you inquired about the air  
 22 monitoring results before you signed this report in mid July of  
 23 2017 or can you just not remember?  
 24 A Well, most accurately, I just can't  
 25 remember. I mean, I know guessing is not usually encouraged in

1 a deposition.  
 2 Q And I'm not encouraging you to guess.  
 3 MR. DAVIS: So don't guess.  
 4 BY MR. SANDERS:  
 5 Q I'm -- I'm -- I'm simply asking you --  
 6 A No.  
 7 Q And -- and -- and with thinking about the  
 8 fact that you're going to make this report and you're going to  
 9 sign it, do you think you asked for the air monitoring results  
 10 before you did that report?  
 11 MR. DAVIS: Wait. Which one we talking  
 12 about now?  
 13 MR. SANDERS: July 14, 2017.  
 14 MR. DAVIS: Exhibit Two.  
 15 MR. SANDERS: Exhibit Two, yes, sir.  
 16 THE WITNESS: I do think so. I do think  
 17 so. But I --  
 18 BY MR. SANDERS:  
 19 Q And when -- I'm sorry. When did you --  
 20 when did you form your intent to rely heavily on air monitoring  
 21 data? Probably was from the beginning, wasn't it?  
 22 MR. DAVIS: Objection. It's a compound  
 23 question. Either answer the first one or the second  
 24 one.  
 25 THE WITNESS: Oh, well, as to when,

1 probably not until I was told that there might be  
 2 some air monitoring data. Because I wasn't -- I  
 3 didn't independently look for that. I think that --  
 4 I think that from earlier on before this, as to what  
 5 date, I don't remember, I was told --  
 6 BY MR. SANDERS:  
 7 Q Well, stop -- let me stop you a second.  
 8 Before this --  
 9 A Before the July 17th --  
 10 Q Thank you.  
 11 A -- 19 -- 2017 report.  
 12 Q Yes, sir.  
 13 A I was told that there might be such data.  
 14 And at that point I thought it would be very scientifically  
 15 useful, and I was excited by it. And as to what point I found  
 16 out that those data were not going to be available, relative to  
 17 the point that I found out that they might be available, I don't  
 18 know exactly. I don't even -- can't even tell you the interval  
 19 between finding out that they might be available to finding out  
 20 that they probably would not be available. I don't know what  
 21 the interval was. To me, it's all squashed together.  
 22 Q Okay. You finished?  
 23 A Oh, yeah. I'm sorry.  
 24 Q Okay. I think this is clear, but let me  
 25 ask you a direct question. It -- it's clear from your testimony

1 Q Are we ready to proceed to the next  
2 issues?  
3 MR. DAVIS: Are you through with the  
4 spread sheet?  
5 MR. SANDERS: I am for the moment.  
6 MR. DAVIS: Okay.  
7 MR. SANDERS: Unless -- unless Dr. Terry  
8 needs it for other questions or previous questions.  
9 MR. DAVIS: Okay.  
10 BY MR. SANDERS:  
11 Q You're fine right now?  
12 A Fine.  
13 MR. ISAAC SANDERS: Are we done with that?  
14 MR. SANDERS: Uh-huh.  
15 MR. ISAAC SANDERS: Off the record really  
16 quick.  
17 (Off the record.)  
18 BY MR. SANDERS:  
19 Q I want to take you back to Exhibit Two, I  
20 believe. Did I identify that for you? And Exhibit Two, yes, is  
21 your report that you signed in July of 2017.  
22 A I -- I may have a different exhibit.  
23 Because there's no signature on this. Maybe it's -- maybe it's  
24 not the Exhibit Two that you're referring to.  
25 Q No. This is something else.

1 MR. DAVIS: Wasn't Exhibit Two the May  
2 one?  
3 THE WITNESS: Maybe I should look for the  
4 stickers.  
5 MR. DAVIS: Yeah, look for the stickers.  
6 BY MR. SANDERS:  
7 Q Yeah, look for the stickers. I don't know  
8 where this came from. Here's Exhibit Two.  
9 A Thank you.  
10 Q Here we go.  
11 A Thank you.  
12 MR. DAVIS: This was in your files.  
13 BY MR. SANDERS:  
14 Q You found it?  
15 A I did. You found it.  
16 Q Still under item number one on page one of  
17 Exhibit Two, which is your report from July of 2017. At the end  
18 of that first paragraph --  
19 A Yes.  
20 Q -- you talk about the -- the data. And  
21 you go on to say, "The data suggests that the fly ash increased  
22 the risk of having these diseases and conditions when compared  
23 with the data from the population as a whole" -- et cetera.  
24 A Uh-huh.  
25 Q Okay. Do you have that data?

1 A I do not any longer have the population  
2 data. But they should be accessible to anybody. They're  
3 publicly-available.  
4 Q Okay. You no -- you no longer have it.  
5 A I did a calculation based on what I had.  
6 And I looked at the numbers and I made what they suggest and I  
7 said what they suggest. That's --  
8 Q Okay. Here -- here's what I'm trying to  
9 get at.  
10 A Yes.  
11 Q I don't see anything in Exhibit Two or in  
12 your October report or in your present report from -- from April  
13 of this year that tells us what this calculation is or what the  
14 data is that -- that helped you make that calculation.  
15 A Got it.  
16 Q I need to know what that data is.  
17 A Okay.  
18 Q You're telling -- you're telling me that  
19 you -- you got it and you used it, and apparently -- let me just  
20 ask you -- you relied on it.  
21 A In conjunction with other things, yes.  
22 Q Okay. Right.  
23 A Yes.  
24 Q And it's not in the reports, is it?  
25 A It certainly wouldn't be in the most

1 recent one. Because the most recent one hadn't -- really was  
2 taking a totally different approach.  
3 Q Well, that's another question I want to  
4 ask you.  
5 A Yes, sir.  
6 Q Maybe this will make it quicker to go  
7 through what I was getting ready to go through.  
8 A Yes.  
9 Q You're no longer relying on data of the  
10 association between the incidence of disease here in these  
11 plaintiff workers and the population as a whole.  
12 A Correct.  
13 Q It's not part of what you're doing.  
14 A Not part of my calculus and not part of my  
15 consideration for the report that's most recent, the one that  
16 you mentioned from April of 2018.  
17 Q Right.  
18 A I did not consider anything --  
19 Q Okay.  
20 A -- other than the published literature.  
21 Q So you're not relying on any of that --  
22 A No. No, sir.  
23 Q -- for purposes of the opinions you're  
24 going to give in this trial.  
25 A No, sir.

1 Q Correct?

2 A Correct.

3 Q I'm correct.

4 A You are correct.

5 MR. DAVIS: Did that shorten the

6 deposition a little bit?

7 BY MR. SANDERS:

8 Q A little bit.

9 I'm still -- I still want to ask you,

10 though. Is there a place where you have this data and this

11 calculation that you could provide us?

12 A No. And it's not an unwillingness to do

13 so, it's a not available to do so.

14 Q Why is it not available?

15 A Because once I made a -- first of all,

16 once I made a calculation and realized that we were still

17 waiting for more data, that's a preliminary judgment. It's a

18 preliminary. And I -- I certainly intended to make that

19 preliminary nature of the data explicit. If I did not then that

20 was an oversight, trust me. It was not intentional. But it was

21 a preliminary calculation with the expectation that more data of

22 a reliable nature would be provided to me. Because I think I

23 made it clear to anyone who would listen to me that we needed

24 more data to -- to be able to state things with the kind of

25 certainty that a -- a journal editor would -- would find

1 acceptable. And at that time I was still aware of the -- of the

2 possible use of these data for the larger scientific community

3 at that point.

4 Q The data that you had before it went away,

5 did you provide that to the lawyers in this case; the

6 calculations or the data?

7 A I did not. I would have if they had asked

8 me, but they did not ask me.

9 Q Do you remember the percentage of higher

10 incidence of disease as to any disease or any constituent

11 element of fly ash?

12 A Nothing exact. The figures that I kind of

13 remember is a doubling of incidence compared to what would be

14 expected. But, again, confidence intervals were wide.

15 Estimates varied based on what the disease was. And I couldn't

16 give you a number that would reflect all of those things. I --

17 I just couldn't.

18 Q Okay. Maybe I can shorten this down a

19 little bit. And I'm closed over my pay grade in my

20 understanding of these things. So I want you to listen very

21 carefully to what -- what I'm saying. And if you disagree with

22 me, I want you to correct me.

23 It sounds to me like what you -- you did

24 enough work in this case when you were going to do an

25 epidemiological study that formed a hypothesis and that you

1 didn't have enough information data in order to prove or

2 disprove that hypothesis. Is that a fair statement?

3 MR. DAVIS: Objection to the form. You

4 may answer if you can.

5 THE WITNESS: Okay. Well, I would say

6 that the word "hypothesis" is not exactly correct.

7 Because a hypothesis to me is a prediction. I had no

8 predictions.

9 BY MR. SANDERS:

10 Q Okay.

11 A In other words, a hypothesis is an A

12 priority prediction of what the data will show. I simply wanted

13 to see what the data showed. Now, I could possibly answer your

14 question by saying while the data -- I've seen data that shows

15 something when the numbers are small and then as more data come

16 in, it gets bigger, it gets smaller, it could even go away.

17 Q Go the way -- other -- go away.

18 A Even go the other way or go away. So I

19 think that's why if one were to apply statistical definitions of

20 likely, then you'd want confidence intervals that exclude going

21 away. Put it that way. But if you want to say likely in a more

22 preponderance weight of the evidence kind of thing, that doesn't

23 -- that doesn't have a number to it except that, well, it's more

24 -- at this point in time it seems more likely than not. But

25 you're not putting any weight of judgment except to say it seems

1 more likely than not. And in -- in order for me to get more

2 statistically certain I would have required more data. And I

3 started wondering whether that was going to happen. And at some

4 point I -- I don't know if gave up is the right word, but I --

5 it sort of effectually gave up on it.

6 Q Both in terms of -- of your helping the

7 plaintiffs in this case as an expert and in publishing a paper.

8 A Yeah. I thought that the -- the -- the

9 data as a -- as a end point in itself was worth the effort.

10 Q Okay.

11 A Otherwise it stays as a point of

12 litigation and the scientific community never -- never can use

13 it. So that was my original idea for the ultimate use, from my

14 perspective.

15 Q Right. I think -- I think I understand.

16 And it sort of answers my next question.

17 And probably does, but I'm going to ask it anyway. You didn't

18 -- at the time that you signed this report that somebody else

19 wrote in July of 2014 --

20 A Yes. No. It wasn't 2014, sir.

21 Q I mean '17.

22 A Yes, sir. Yes, sir.

23 Q This deposition and accident occurred in

24 2014.

25 A Yeah. I think you meant the 14th of July,

1 2017.

2 Q Yeah. That's a better explanation.

3 A Yes, sir.

4 Q So we're talking about Exhibit Two.

5 A Yes, yes, yes.

6 Q When you wrote that.

7 A Yes.

8 Q You hadn't actually formed an opinion yet,  
9 right?

10 MR. DAVIS: Objection.

11 THE WITNESS: Well, no, I -- I did form  
12 an opinion, but it wasn't backed up with the  
13 statistical significance aspect of it.

14 BY MR. SANDERS:

15 Q Okay.

16 A And so -- by the way, journals, when they  
17 publish something and reviewers of journal articles, they're  
18 less concerned with your personal opinion than they are with the  
19 statistical certainty. So there's my -- there's my opinion and  
20 there's what's going to fly in a journal.

21 Q Okay. I understand.

22 Doctor Terry, do you know, from your work  
23 in this case, or any other work that you've done, what is a  
24 health harmful level of exposure to fly ash? How much fly ash  
25 does it take to cause harm to -- to individuals?

1 A I can tell you that I don't know. And I  
2 can qualify that a little bit if you want.

3 Q No. I'm happy for you to qualify it.

4 A One of the reasons is because exposure  
5 itself is hard to determine. There's different routes of  
6 exposure. There's multiple routes of exposure. Somebody can  
7 breathe it, somebody can ingest it, somebody can have it exposed  
8 to their skin, some people can ingest enough of it that it --  
9 it's clearly evident in the digestive tract, for example. I  
10 suppose eyes and -- and -- there -- in other words, there are  
11 multiple routes by which you can be exposed. So to be able to  
12 say what level of exposure is important is highly dependent on  
13 two things; the route of exposure, the concentration of the  
14 substances that might be -- acting causally to cause a  
15 condition. And, finally, the sensitivity of the person.  
16 Because there are people who are still smoking after 96 years  
17 and still alive.

18 Q Still alive.

19 A So, yes, there's individual susceptibility  
20 to exposures that make -- all these things make it very  
21 difficult to say anything sort of blanket statement by saying,  
22 okay, you need two of -- you know, pick any number you want.  
23 Pick any unit you want; you know, milliliters per this or grams  
24 per that. It's -- it's very hard to say. And I think that -- I  
25 think that the literature is deficient in that area. I think

1 that understanding the susceptibility factors is being fleshed  
2 out as we speak.

3 But I think that the knowledge of the  
4 genetic factors and other lifestyle factors -- and I'll give you  
5 one more. If you just got a certain level of pick your  
6 substance, arsenic -- and I'm not picking on that for any reason  
7 except that it starts with the letter A. It could be that  
8 arsenic by itself requires a higher dose than arsenic when  
9 you're also exposed to lead or arsenic when you're also exposed  
10 to lead and -- and something else.

11 Q So a synergistic effect.

12 A Yes. And -- and those -- those things  
13 combined make it extremely difficult -- I mean, people do, and  
14 governments do set limits, but they'll never tell you it's an  
15 easy thing to do.

16 MR. SANDERS: Okay. I need to do two  
17 things with what -- at least two things with what you  
18 just told me. First I would like for you to read  
19 back because I lost it and I want to use your exact  
20 words. In -- in the first couple of sentences of his  
21 qualification on his I don't know, could you read  
22 that back to me?

23 (A portion of testimony was read by  
24 the court reporter.)

25 THE WITNESS: Inhalation, I said.

1 BY MR. SANDERS:

2 Q I didn't hear you.

3 A Inhalation, I said too.

4 Q Well, that's -- let me go back and do --  
5 that's part of what I want to do. Would it help your answer or  
6 reduce the qualifications if I limited my question about what --  
7 how much is harmful of fly ash exposure, now. Not any of these  
8 constituent elements. I'm going to ask you about those in a  
9 minute. But in terms of fly ash exposure, airborne, inhalation,  
10 what is a harmful level, do you know?

11 A No. Because it depends on the person and  
12 their susceptibility and how they inhaled it.

13 Q Okay.

14 A How deeply they inhaled it, how often --

15 Q I think the word I'm trying to remember --  
16 and you also said the concentration.

17 A Yes, sir.

18 Q Now, concentration is dose, right?

19 A Yes, sir.

20 Q So dose matters.

21 A Yes.

22 Q I know where I'm going to start with this.  
23 I'm going to ask you the same question -- constituent elements.  
24 I'm going to start as "did you" with, A, arsenic.

25 A Yes, sir.

1 Q How much airborne exposure to arsenic will  
2 cause harmful health effects, do you know?  
3 A No. I can't give you an exact number that  
4 applies to everybody. I can't.  
5 Q Okay. Can you give me an exact number  
6 that applies to anybody?  
7 A No, sir.  
8 Q All right. The same question as to  
9 beryllium.  
10 A No, sir.  
11 Q Cadmium.  
12 A No, sir.  
13 Q Indeed -- here, we can make this easier.  
14 In -- in your last report, your April 30 report, you have a list  
15 of chemicals --  
16 A Yes, sir.  
17 Q -- that you considered.  
18 A Yes, sir.  
19 MR. DAVIS: Which we haven't marked.  
20 BY MR. SANDERS:  
21 Q I'm going to read them off to you and then  
22 we'll mark it.  
23 A Yes, sir.  
24 Q And -- and if you want to look at these --  
25 A Yes, sir. You want -- do you want me to

1 wait until you're done reading?  
2 Q Do you have it in front of you?  
3 A I -- what page would that be?  
4 Q It's going to be on page five.  
5 A Yes, sir.  
6 MR. SANDERS: And what I'd like to do,  
7 Gary, if it's all right with you, our copies, for  
8 some reason, have Exhibit Four because it came from  
9 some proceeding.  
10 MR. DAVIS: Right.  
11 MR. SANDERS: Can we tear off this Exhibit  
12 Four thing and just mark this as Exhibit 12?  
13 THE COURT REPORTER: Twelve.  
14 MR. SANDERS: Can we do that?  
15 MR. FRIEDMAN: Just flip that over.  
16 MR. DAVIS: Well, it's -- it's big. It's  
17 like that.  
18 MR. FRIEDMAN: Oh, okay. I'm sorry.  
19 (Inaudible discussion about Exhibit 12.)  
20 MR. SANDERS: I'm going to -- she's going  
21 to mark this and I'm going to hand it to you.  
22 (EXHIBIT NO. 12 WAS FILED.)  
23 BY MR. SANDERS:  
24 Q I think we're trying to find page five?  
25 A Yeah.

1 Q And the -- I've already asked you about  
2 arsenic. I asked you about beryllium, but that wasn't on your  
3 list. Then cadmium, is it? It's on your list?  
4 A Yes, it is.  
5 Q Do you know what a harmful level of that  
6 is?  
7 A Not for any individual.  
8 Q Okay. Chromium?  
9 A No.  
10 Q Lead?  
11 A No.  
12 Q Nickel?  
13 A No.  
14 Q Vanadium?  
15 A No.  
16 Q And what about naturally-occurring  
17 radioactive material and ionizing radiation in general?  
18 A No, no.  
19 Q Do you know?  
20 A Not for any individual, no.  
21 Q Okay. Now, some of these, maybe all of  
22 these, are all naturally-occurring. You have  
23 naturally-occurring radioactive material, that means exactly  
24 what it says, doesn't it?  
25 A Yes. We know, for example, that -- that

1 homes can be -- have certain levels of radon, for example.  
2 Q Well, I'm talking about  
3 naturally-occurring radioactive -- in the soils.  
4 A Yeah. But that radon is  
5 naturally-occurring.  
6 Q All right. All right. So --  
7 A It's a gas that comes out of the soil.  
8 Q Right. And it -- it occurs in nature.  
9 A It certainly does.  
10 Q And so does arsenic.  
11 A Certainly does.  
12 Q As a matter of fact, there's probably  
13 arsenic in your backyard.  
14 A Probably.  
15 Q And in mine.  
16 A Probably.  
17 Q Is that true for cadmium?  
18 A I believe it is.  
19 Q Chromium?  
20 A I believe it is.  
21 Q Lead, for sure.  
22 A For sure.  
23 Q Nickel?  
24 A Yes.  
25 Q And vanadium.

1 A I'm less sure about vanadium, but I would  
2 imagine so.  
3 Q Okay. If you decide that that was wrong  
4 later on, tell me. I don't think vanadium is going to be the  
5 key to this case.  
6 A Yeah. I'm just not as familiar with it.  
7 Q I understand. Neither am I.  
8 I assume also -- no, I'm not going to  
9 assume. Let me just ask you. Have you looked up, for example,  
10 for arsenic, the permissible exposure level for arsenic set by  
11 OSHA?  
12 A No.  
13 Q Do you know how they go about -- how OSHA  
14 goes about setting those permissible exposure limits for  
15 something like arsenic?  
16 A I have an idea, but I have not been  
17 involved with setting limits like that.  
18 Q I'm not trying to suggest that. I'm  
19 asking what you know. Do you know it's, for example, based on a  
20 working life of an average US worker?  
21 A Item -- there is no such thing as an  
22 average US worker. But, yeah, it's based on -- to my  
23 understanding, it's based on information wherever it can be  
24 obtained that's relevant including, but not limited to, animal  
25 studies, dose-ranging studies in animals and tissue and blood

1 levels in human beings and, in certain cases, when is allowable,  
2 when it's part of a nutrient complex like -- like I believe  
3 chromium can be -- or cadmium can be. They actually do what's  
4 called feeding studies. I mean, they're not going to do that  
5 with a poison, but --  
6 Q "They" being the OSHA people.  
7 A Yes.  
8 Q Or the people that contract with OSHA to  
9 do the work.  
10 A To my knowledge, yes. They'll --  
11 they'll -- in -- in certain -- but it's not only OSHA. I mean,  
12 USDA does things like that as well.  
13 Q All right. What about NIOSH?  
14 A I believe they do, yes, and -- and IVHS as  
15 well.  
16 Q Do you know from any of those different  
17 sources what the permissible exposure limits are for arsenic?  
18 A No. And I'd -- and I'd also say that --  
19 that that -- those limits do change over time. So --  
20 Q When they learn more they might change  
21 things?  
22 A They have. And they -- they might  
23 continue to, yes.  
24 Q But they change both ways, don't they?  
25 A Yes, sir.

1 Q Up and down.  
2 A Yes, sir.  
3 Q You obviously know something about  
4 toxicology, right?  
5 A Something.  
6 Q Yeah. Hopefully it's more than I do.  
7 You -- you -- you've had to at least rely  
8 on toxicologists or you've consulted toxicology texts or other  
9 things in order to do some of your work.  
10 A Yes.  
11 Q In the past.  
12 A Yes. I've not contacted a person. But I  
13 have looked at their data.  
14 Q Okay.  
15 A I have looked at reports from agencies  
16 that deal with toxicological findings and limits and things like  
17 that.  
18 Q All right.  
19 A But a great deal of my report is also  
20 epidemiology.  
21 Q Right. Epidemiologists often have to use  
22 toxicology in order to do your work, correct?  
23 A It's not always necessary, but it can be,  
24 yes.  
25 Q Right. I thought I was being careful.

1 A Yes.  
2 Q Can be. Doesn't have to be.  
3 A Correct.  
4 Q And you're not a toxicologist,  
5 A No, sir.  
6 Q You know something about it.  
7 A Yes, sir.  
8 Q But you're not a toxicologist --  
9 A Correct.  
10 Q -- right? Do you have any educational  
11 training in toxicology?  
12 A I have no degrees in toxicology.  
13 Q Did you take any courses?  
14 A I took courses in environmental health  
15 that had a component. But it was not -- we're going back a few  
16 years. But I don't think --  
17 Q Just a few.  
18 A -- it was called toxicology 101.  
19 Q Right.  
20 A I think it was called -- it was variations  
21 of environmental health.  
22 Q Okay. Do you agree with me there are many  
23 substances in nature that potentially can be harmful, right?  
24 A Right.  
25 Q And they're around us all the time, every

1 day.  
 2 A Unequivocally.  
 3 Q You agree with that.  
 4 A Totally.  
 5 Q And do you agree with me that dose makes  
 6 the poison?  
 7 A On an individual level, it does.  
 8 Absolutely. There are some exposures which are considered no  
 9 amount of exposure is totally safe. In other words, there is  
 10 no -- the less the better. I would say that's true for ionizing  
 11 radiation -- unless you're being treated for something with it.  
 12 I would say that's true for radon gas. I would say that's true  
 13 for asbestos. I would say that's true for particulates. I  
 14 would say that's true certainly for any given individual given  
 15 their constitution there may be a limit that will not lead to  
 16 disease during their life span however long it might be.  
 17 Q Okay. Let me -- let me press on you a  
 18 little bit on that.  
 19 A Please.  
 20 Q In your list of things that there is no  
 21 safe level --  
 22 A Yes.  
 23 Q -- you didn't include any of the things in  
 24 your list except two, right?  
 25 A Yes. I --

1 Because it has no good function means to you there's no --  
 2 A I'm not aware of any benefits that it  
 3 might have.  
 4 Q I'm with you. I understand what you're  
 5 telling me.  
 6 A Okay.  
 7 Q Now, let me ask you, then, about  
 8 particulates.  
 9 A Yes.  
 10 Q And I think you identified in your report  
 11 a particular class or size of particulates or mass of  
 12 particulates.  
 13 A Yes.  
 14 Q That is less than 2.5.  
 15 A Yes.  
 16 Q Right?  
 17 A Yes.  
 18 Q And are you saying that there's no safe  
 19 level for particulates of that size for all of us?  
 20 A No.  
 21 Q Or any of us?  
 22 A No, sir. I'm saying that for -- it's just  
 23 like -- if I were to give a direct answer I'd say I never know  
 24 with an irritant, with something that could provoke an immune  
 25 response whether that immune response could lead to ultimately a

1 Q There -- there's no -- you wouldn't put a  
 2 no safe label on any of the substances that we just went through  
 3 from page five of Exhibit 12 except for particulates and  
 4 radioactive material -- radon.  
 5 A Well, certainly chromium six has no  
 6 nutritional value, for example. I don't -- I don't see that as  
 7 having a quote, unquote, sure, go ahead, you know, be exposed to  
 8 it level.  
 9 Q No, no. It's --  
 10 MR. DAVIS: Well, let him finish. Were  
 11 you finished with your answer?  
 12 THE WITNESS: Yeah, sure. Yeah.  
 13 BY MR. SANDERS:  
 14 Q What I'm trying to ask is you -- I've  
 15 heard this before from -- from -- in other cases. There's some  
 16 things in which there is no safe level. The government has  
 17 decided at least, there's no safe level.  
 18 A Yeah, there's no known safe level. Yeah.  
 19 Q Right. And so that doesn't apply to  
 20 anything on this list with the possible exception of  
 21 particulates and radon, right?  
 22 A Yes. But I would also mention that  
 23 chromium six, given it's -- to my knowledge it has no positive  
 24 function in the human body.  
 25 Q Well -- but you seem to be back into that.

1 change in DNA or a change in a cell. Certainly one aberrant  
 2 gamma ray can cause damage while it -- while overall you might  
 3 say, okay, you know, when you take a plane flight, you're not  
 4 putting yourself at any great risk. What -- what the risk  
 5 category are in some cases like that is, you know, highly --  
 6 high risk. Because you can't quantify for any individual.  
 7 Medium risk -- I'm talking about doses of radiation. Low risk  
 8 and then risk cannot be determined. It's just not enough  
 9 strength signal for that.  
 10 Q Let me -- let me stick with particulate.  
 11 A Sure.  
 12 Q I'll get to radioactive material in a  
 13 minute.  
 14 A Sure.  
 15 Q Let's go with particulates.  
 16 A Sure.  
 17 Q Particulates are in dust that we breathe,  
 18 right?  
 19 A Right.  
 20 Q And you're not telling me that there's no  
 21 safe level of dust.  
 22 A There's -- there's a level of dust that is  
 23 so low that most people would not have any harmful effects from  
 24 it.  
 25 Q Okay. But you're saying that there are



1 some people that could have harmful effects from some dosage of  
2 dust.

3 A The lower the exposure to particulates,  
4 dust, if you want to use a catch-all term -- but we're talking  
5 about the particulates you mentioned, less than 2.5, right?

6 Q Uh-huh.

7 A The lower the dose the rarer it is that it  
8 could harm somebody. I don't know where that dose is or if  
9 there's a dose where -- except zero, where the number of people  
10 potentially harmed is not -- is zero. I don't know that.

11 Q Does anybody know that?

12 A I don't think so.

13 Q Because it's not knowable.

14 A It's not knowable with what we have  
15 available to us, yeah.

16 Q Exactly. And -- and -- and, the truth is,  
17 all of us are exposed to dust.

18 A That's correct.

19 Q So how --

20 MR. DAVIS: Object to the form of the  
21 question about dust. Unless you want to be more  
22 precise and define it as how he defined it.

23 MR. SANDERS: Well, we've been talking  
24 about it for a while now. So you're a little late.

25 MR. DAVIS: Less than 2.5 microns, defined

1 Q Right. But you know --

2 A There are -- there are guidelines, yeah.

3 Q Okay. And -- and you don't know at what  
4 level they would become impermissible as to any of those parts  
5 of particles are in respirable dust less than 2.5.

6 MR. DAVIS: I'm going to object to the  
7 question. It's confusing. You can answer if you  
8 understand.

9 THE WITNESS: Yeah. It -- it --

10 BY MR. SANDERS:

11 Q Do you understand?

12 A I mean, if you're saying -- if you're  
13 asking me whether there's a level above which would concern even  
14 a government agency, there are levels above which it could  
15 concern a government agency.

16 Q Right. And do you know what those are?

17 A No.

18 Q Okay. Do you think the government does?

19 A I think the government has set limits or  
20 suggested limits on a lot of things based on the current  
21 evidence that they have. Like dioxin, for example, I think as  
22 evidence changes -- for example, we're starting to see more and  
23 more that people, because of their genetic makeup, which we are  
24 starting to understand, they may be more susceptible than  
25 somebody without that genetic makeup. So limits are going to be

1 particulates.

2 THE WITNESS: Yes.

3 BY MR. SANDERS:

4 Q Okay. Well, let's say less than 2.5  
5 microns. Nobody can know that.

6 A No. Nobody.

7 Q Right. Now, there are, in fly ash,  
8 certain things that would be included within the definition of  
9 particulates, is there not, or do you know that?

10 A Yes. There are.

11 Q What are those things?

12 A The by-products can be -- the ash itself  
13 can be in that size category, less than 2.5 --

14 Q I'm sorry. I didn't ask the question very  
15 well. Within the definition of particulates in fly ash,

16 A Yes.

17 Q There are different things, are there not,  
18 like quartz?

19 A Oh, yeah. Silica or this or that.

20 Q Exactly. Exactly.

21 A Yes.

22 Q Do you know that OSHA, NIOSH and some of  
23 the other things, they set permissible exposure limits for those  
24 constituent elements of particles less than 2.5?

25 A I don't know what those levels are.

1 tailored, in my opinion, in the future to consider personal  
2 susceptibility.

3 Q And I'm going to agree with you rather  
4 violently on that.

5 A Disagree or --

6 Q Agree with you rather violently on that.

7 A Okay. Sure.

8 Q And as a matter of fact --

9 MR. DAVIS: We don't need violence --

10 BY MR. SANDERS:

11 Q As a matter of fact, this -- this is --  
12 the DNA and the study of adducts and those kinds of things is  
13 going to -- to better explain why it is that cancer is caused  
14 and their bodies are going to be sus -- less susceptible or more  
15 susceptible based upon DNA, right?

16 A Yes. Yes.

17 Q And that's what you're saying.

18 A Yes, sir.

19 Q I assume you would agree with me, then,  
20 that the best we can do at any given point in time is to abide  
21 by what we know in terms of --

22 MR. DAVIS: Objection.

23 BY MR. SANDERS:

24 Q -- permissible?

25 MR. DAVIS: Objection. It's vague.

1 THE WITNESS: Do you want me to answer?  
 2 MR. DAVIS: You can if you can.  
 3 BY MR. SANDERS:  
 4 Q Not telling you -- I'll let the question  
 5 stand.  
 6 A And I would say that judgments are  
 7 normally made when those judgments are deemed necessary to be  
 8 made more immediately. Sometimes you compromise on the amount  
 9 of information you have and you go with the best evidence that  
 10 you have. If it's not immediately required that you make a  
 11 decision -- which -- which it would be with certain illnesses  
 12 that might be caused by a certain exposure like that  
 13 contaminated this or et cetera, et cetera. Then sometimes the  
 14 best thing is to wait for more information as -- and have very  
 15 clear plans for acquiring that information that you would need  
 16 to make a decision.  
 17 But, yes, often you have to make a  
 18 decision based on what information you have available at that  
 19 time.  
 20 Q Do you know how a lab measures the amount  
 21 of a constituent element in an air monitoring sample? For  
 22 example, and in particular, in fly ash. It's particles, right?  
 23 A Yes. I know that some studies have been  
 24 done with some sort of X-rays that, based on how they are  
 25 deflected or absorbed, can give you a clue as to the

1 constituents. I know it's involving X-rays, but I forgot the  
 2 exact term at the moment.  
 3 Q Do you know of any other way in which a  
 4 lab is able to look at an air sample and determine how much  
 5 arsenic, for example, is included in that sample?  
 6 A Right. I'm more familiar with the  
 7 technology that involves absorption of radiation, for example.  
 8 Q I got that. Do you know of any other  
 9 ways?  
 10 A You know, you have Selvi (phonetic) and  
 11 mass spec type of things; time of flight, the -- how quickly  
 12 molecules are -- are transmitted is sometimes used to determine  
 13 the constituents. Proteomics uses that to some extent, and --  
 14 and metabolomics. I think that there are ways to dissolve  
 15 chemicals. Not necessarily in the air, though. So --  
 16 Q Well, to measure them in the lab. You --  
 17 you got -- you got a sample from air monitoring, you got  
 18 particles.  
 19 A Air monitoring in particular. Not -- not  
 20 substance. Not the actual substance. How do they monitor in  
 21 the air, is what you're asking me.  
 22 Q No. I'm sorry.  
 23 When a sample is taken -- there's air  
 24 monitoring like with these pumps that were used in this case --  
 25 A Okay. So it's an air sample.

1 Q With -- with a filter or sample in it.  
 2 MR. DAVIS: Let him finish.  
 3 BY MR. SANDERS:  
 4 Q Correct? Come up with a sample. Send it  
 5 to the lab. Tell the lab, I want to know how much arsenic is in  
 6 this sample. That -- that arsenic is in the particle. How do  
 7 they measure how much arsenic is in that particle?  
 8 A Other than what I've told you, I don't  
 9 know.  
 10 Q Okay.  
 11 A I was just trying to --  
 12 Q In your -- and I realize that you may not  
 13 be relying on this anymore, but in your October 27th report,  
 14 which is Exhibit No. --  
 15 MR. ISAAC SANDERS: Twelve. No. I'm  
 16 sorry. That's the -- that's the new one.  
 17 BY MR. SANDERS:  
 18 Q -- Eight. Exhibit Eight, your October 27,  
 19 2017, report.  
 20 A Exhibit Eight.  
 21 Q Yes, sir.  
 22 A I have Exhibit Eight.  
 23 Q All right. Would you turn to page two,  
 24 under "conclusions."  
 25 A Yes.

1 Q You write in there -- and somebody  
 2 decided, maybe it was you, to put in bold the phrase  
 3 "biologically plausible." Was that your choice or somebody  
 4 else's?  
 5 A I did not write that.  
 6 Q Okay. But you signed it.  
 7 A I signed it.  
 8 Q Under oath.  
 9 A Under oath.  
 10 Q And -- and the sentence read -- well, you  
 11 read it for me.  
 12 A "At this point in time the data suggests"  
 13 -- and that would be a "sic" because "the data suggests" is not  
 14 right.  
 15 Q Right. You didn't write that either, did  
 16 you?  
 17 A No. No. No. This is based on my  
 18 discussions, which were translated into this document.  
 19 Q Right.  
 20 A "The data suggest that the alleged  
 21 injuries of the plaintiffs being caused by extended exposure to  
 22 fly ash is biologically plausible because exposed workers have  
 23 higher occurrence of several diseases and health conditions  
 24 compared with the general population and our control group."  
 25 Q Okay. So you're saying, I believe,

1 correct me if I'm wrong, that the reason you think it's  
2 biologically plausible is because of this higher occurrence  
3 incidence.

4 A Yes and no. I'm certainly -- did not mean  
5 to state or imply that that's the only reason or the most  
6 important reason.

7 Q Okay. And -- and -- and I'm glad you said  
8 that because I was going to ask you anyway.

9 A Yes, sir.

10 Q Do you have any other basis for saying  
11 it's biologically plausible that the plaintiffs' injuries are  
12 caused by extended exposure to fly ash other than this incidence  
13 rate thing?

14 A Yes.

15 Q What other reasons do you have?

16 A The -- the constituents of fly ash and the  
17 level of exposure, combined with the higher incidence of  
18 diseases that have been linked to those exposures, adds to the  
19 overall conclusion more so even than the -- I mean, the higher  
20 incidence rates are kind of necessary here. Because without it  
21 you have nothing to conclude.

22 But the basis for that conclusion is not  
23 the high incidence rates. That's a necessary component of the  
24 conclusion. But the -- but the general picture of exposures  
25 unknown completely -- not -- not completely known how much

1 do anything in the human body?

2 MR. DAVIS: Object to the question as  
3 being overbroad and vague.

4 BY MR. SANDERS:

5 Q You can answer.

6 A I mean, in some cases, depending on the  
7 route, substances can be absorbed and metabolized with  
8 ingestion, with contact with the skin, with -- you know, so they  
9 do change forms. Often you'll see the excretion of a different  
10 form of some of these substances than what would be in the coal  
11 ash. So that implies that it's been metabolized in some way.

12 Q Okay. What about in the lungs?

13 MR. DAVIS: Are you asking about specific  
14 substances or in general?

15 BY MR. SANDERS:

16 Q Yeah. Any constituent element, how --  
17 how --

18 A How is it --

19 Q -- how it gets loose from --

20 A Typically loose --

21 Q -- the fly ash particle in order to be --  
22 to do any damage whatsoever in the lungs.

23 A Except for the process of -- some things  
24 are soluble. Some things can be loosened by contact with --

25 Q Is that --

1 exposure by different routes of exposure or how much synergy  
2 there may be, but the fact that there likely is synergy, and the  
3 fact that the constituents in coal ash have been linked to -- to  
4 these conditions so much so that there's been concern expressed  
5 in the review articles that I read, and in the government  
6 reports that I read, in the calls for stricter exposure  
7 guidelines that I was aware of. So it was multiple things put  
8 together.

9 I think that the only thing that I can  
10 clearly say about -- about the higher incidence is that it does  
11 not make it biologically plausible. It's -- it's the condition  
12 that is necessary in order to even argue biological  
13 plausibility. So I believe that I didn't state that as clearly  
14 as I should have.

15 Q Well -- and -- and -- and this -- this  
16 business about the higher incidence, that's no longer part of  
17 your opinion in this case, right?

18 A Correct. I -- I have divorced myself  
19 completely from the data that were collected in this case.

20 Q Okay. Now, do you understand that these  
21 -- we kind of hit on this a minute ago -- do you understand  
22 these constituent elements are a part of the ash particle?

23 A Yes, sir.

24 Q And do you know how it is that those  
25 constituent elements get unbound from that particle in order to

1 A -- fluid.

2 Q -- so in this case?

3 MR. DAVIS: Objection.

4 BY MR. SANDERS:

5 Q Do you know?

6 MR. DAVIS: Vague and general question.

7 BY MR. SANDERS:

8 Q Do you know?

9 MR. DAVIS: -- very specific  
10 opinions about that.

11 BY MR. SANDERS:

12 Q Do you know, doctor?

13 A I would know to the extent that -- no, I  
14 -- I've never studied lung tissue in this case nor have I  
15 directed my attention to exactly what happens on a molecular  
16 level in the lung tissue. But certainly when you see leeching  
17 of contaminants into water supplies, for example, they must have  
18 gone through some process related to the contact that it had  
19 with water. And, of course, the lung tissue has water. So I  
20 would say that that is part of it. But there's enzymes in the  
21 lungs. There are other things that can metabolize and loosens  
22 things. I don't know -- again, I've not directed my attention  
23 to -- to that specifically.

24 Q All right. And -- and -- and to put a  
25 finer point on it, you don't know if it does, how it does it.

1 A No, sir, I don't.  
 2 MR. DAVIS: Objection to the -- the  
 3 comment. The question is vague, overbroad. If you  
 4 answer it, it's your answer.  
 5 MR. SANDERS: He did.  
 6 THE WITNESS: Yeah.  
 7 BY MR. SANDERS:  
 8 Q Do you know -- I've asked you and you've  
 9 been very candid about this, about air monitoring results  
 10 from -- from Jacobs.  
 11 A Sure.  
 12 Q Are you aware of any other air monitoring  
 13 results from the Kingston site during the period that -- in  
 14 question here?  
 15 A No, sir.  
 16 Q You -- you haven't seen any air monitoring  
 17 results.  
 18 A No, sir.  
 19 Q Are you aware that there were stationary  
 20 air monitors in and around the site at Kingston that were  
 21 operating and collecting data all during the time of this  
 22 project at Kingston?  
 23 A Okay. So the answer, I will say yes and  
 24 no. I was aware of it. But you have made me more aware of it  
 25 than I was aware of it.

1 Q Okay.  
 2 A Does that make sense to you?  
 3 MR. DAVIS: Assuming what he's saying is  
 4 true.  
 5 THE WITNESS: Assuming what you're saying  
 6 is true, you have now given me more information. If  
 7 you're asking if I was aware that there were  
 8 monitoring, I would say I probably was told that at  
 9 some point. But as to when it was operating, where  
 10 it was operating, you have now given me more  
 11 information than I had before.  
 12 BY MR. SANDERS:  
 13 Q I -- I -- I made a contribution.  
 14 A You have. Thank you.  
 15 Q And -- and I want to draw a distinction  
 16 here between the air monitoring that I was asking you about that  
 17 Jacobs did, which was industrial hygiene individual air  
 18 monitoring.  
 19 A Yes.  
 20 Q As opposed to the one I was just asking  
 21 you about, which was stationary, known in the trade as  
 22 environmental air monitoring, which was both for the site and  
 23 for the surrounding neighborhood's measuring.  
 24 A Yes, sir. I -- I was aware of both -- at  
 25 least I believe that I was made aware of individual monitoring

1 and site monitoring. But that -- but the details of -- of who  
 2 and how many and what and where and how long, I -- I -- I don't  
 3 -- I was never aware of that.  
 4 Q Okay. Nobody told you that.  
 5 A No, sir.  
 6 Q Okay. We were talking about particles.  
 7 Does the shape of the particle matter in terms of airborne or  
 8 inhalation? Does that matter? Other -- you've told me about  
 9 size. You've been very clear about less than 2.5 microns.  
 10 A Yeah. But I --  
 11 MR. DAVIS: Wait, wait. He's not finished  
 12 with the question.  
 13 THE WITNESS: Okay.  
 14 BY MR. SANDERS:  
 15 Q Does the shape of the particle matter?  
 16 A Okay. So let me just correct one thing.  
 17 Well, maybe not correct. But qualify that what I said doesn't  
 18 exclude potential harmful effects of -- of larger particles than  
 19 2.5 microns. I'm just saying that that's more of a problem  
 20 in -- in -- in the eyes of most people.  
 21 Q Fair enough.  
 22 A But when it --  
 23 Q Take your point.  
 24 A But when -- when it comes to the shape, I  
 25 can -- I can -- I have to qualify that. I have to qualify what

1 limited information I can give you by giving you an analogy, if  
 2 it's allowed.  
 3 Q I'm allowing it.  
 4 MR. DAVIS: Go ahead. We're going to have  
 5 to take a break here in --  
 6 THE WITNESS: I'll get spanked later. But  
 7 --  
 8 BY MR. SANDERS:  
 9 Q You may get spanked now.  
 10 A For example, asbestos, part of what it  
 11 does besides cause inflammation, which -- which triggers an  
 12 immune response, which could be related to why people who inhale  
 13 asbestos get cancer -- and I know it's not part of our issue  
 14 here, it's not part of our list -- but the shape of the asbestos  
 15 makes -- interferes with mitosis, they believe, which, of  
 16 course, adds to the replication errors that can lead to cancer.  
 17 So shape does matter even in -- you know,  
 18 inert particles that get caught in the lungs. What I don't know  
 19 is to what extent the shape -- not just the size, like you said,  
 20 but the shape matters when it comes to particulate matter.  
 21 So, by analogy, if it does what asbestos  
 22 does because of a certain shape, or if a certain shape can lead  
 23 to that kind of interference of mitosis, for example, or can be  
 24 more irritating, by analogy, I would say it's possible. And I  
 25 can't tell you any more than that.

1 Q Okay. What is the shape that causes  
2 asbestos to do more damage?  
3 A It's a -- I'm -- I'm basing it on  
4 something that I -- that's not related to this case, rather.  
5 But I believe it's the kind of -- of fibers that -- that are --  
6 that can -- that are long and pointy, basically.  
7 Q Okay.  
8 A But I -- but now you're getting into areas  
9 where I -- I'm really not sure.  
10 Q Fair enough.  
11 MR. DAVIS: Good time for a break?  
12 MR. SANDERS: Yes, it is.  
13 MR. DAVIS: Okay.  
14 THE VIDEOGRAPHER: We're going off the  
15 record. The time is 2:21.  
16 (A recess was had.)  
17 THE VIDEOGRAPHER: We're again back on the  
18 record. The time is 2:41. Beginning of disk three.  
19 BY MR. SANDERS:  
20 Q Doctor Terry, during the break I -- I told  
21 you that I was going to probably next turn to Exhibit 12, which  
22 is your most current report.  
23 A Yes.  
24 Q Dated April 30th, 2018.  
25 A Yes.

1 Q Now, before we get into that, we have sort  
2 of covered a little bit of the period between October 27th, when  
3 you made your sworn declaration. And it was obviously after  
4 that time when you decided that, you know, I can't do this  
5 study. I don't have enough information. I'm going to abandon  
6 this epidemiological study and -- and that was it, right?  
7 A Yes.  
8 Q Okay. And you don't remember when you  
9 told the lawyers of your conclusion.  
10 A What conclusion?  
11 Q That you were going -- that you had to  
12 abandon the study. You couldn't finish the epidemiological  
13 study.  
14 A No.  
15 Q Okay.  
16 A I don't remember when I told them.  
17 Q You know, October 27 was getting on close  
18 to Thanksgiving, which is then getting on close to Christmas.  
19 Was it before Thanksgiving or before Christmas or was it in the  
20 New Year, do you remember?  
21 A No.  
22 Q Okay. And what did they say when you  
23 said, you know, I -- I have to abandon this study, I don't -- I  
24 don't have enough information and you guys didn't get me what  
25 you were supposed to get me?

1 A I don't remember any conflict or anything  
2 like that.  
3 Q Okay. I'm not asking for conflict. What  
4 did they say?  
5 A Yeah. The fact is, it was such a mild  
6 sort of -- the way I remember it, it was to the effect of okay.  
7 It was not -- there was no major discussion about it.  
8 Q Okay. All right. When is the next you  
9 heard from lawyers on this case?  
10 A I would say over the next few months.  
11 Q Okay. And -- and in the meantime did you  
12 do any further work?  
13 A No.  
14 Q Okay. When did you start working again on  
15 this case?  
16 A Probably March 1st or February -- the last  
17 week of February. It's possible the last week of February,  
18 first -- first week of March. That type of -- in that -- in  
19 that area.  
20 Q And at that time tell me of the  
21 conversations that you had with the lawyers that started you  
22 back up again.  
23 MR. DAVIS: I'm going to object to the  
24 questions as being outside the scope of expert  
25 discovery and instruct you not to answer.

1 MR. SANDERS: Well, his -- he's made a  
2 declaration about discussions he had with counsel  
3 that is part of his report and has been used by you  
4 guys in connection with the motions practice. It  
5 seems to me that I'm entitled to ask him questions  
6 about those conversations.  
7 MR. DAVIS: His declaration doesn't  
8 reference conversations. I -- I don't see anywhere  
9 in the declaration it references a conversation he  
10 had with plaintiffs' counsel. Other than paragraph  
11 five, which says what he was requested to do, which  
12 you have a letter to that effect from my firm.  
13 MR. SANDERS: Okay. Well, then, to that  
14 extent, I think I'm entitled to ask questions.  
15 MR. DAVIS: You can ask questions about  
16 the letter. But not about conversations.  
17 BY MR. SANDERS:  
18 Q Let me start with page five of your  
19 report. Paragraph numbered five.  
20 MR. DAVIS: Just to be accurate, that's  
21 the declaration.  
22 MR. SANDERS: You're right.  
23 THE WITNESS: Yes, sir.  
24 BY MR. SANDERS:  
25 Q Paragraph numbered five of your

1 all of these --

2 A Yeah.

3 Q -- criteria?

4 A Yeah. You -- you -- you -- by necessity,  
5 you need multiple papers. If anyone tried to apply Bradford  
6 Hill to a single paper I think they'd run into some difficulty.  
7 Because the -- the -- the consistency wouldn't be there.  
8 Addressing biases, you know, that's something that's not listed  
9 here in Bradford Hill. To my knowledge never listed it as a  
10 criteria, which he should never used the term "criteria." But  
11 we've subsequently started using the term "criteria." I like to  
12 say guidelines, though, by the way. But --

13 Q We'll use -- we'll use however you want  
14 to. At least while you're in the room.

15 A Either way. I'm just saying that he never  
16 used the word "criteria," that I know of.

17 Q Well --

18 A So -- so --

19 Q -- bias -- let me interrupt there. Bias  
20 in a study can be outcome determinative, can't it, or it can  
21 basically undermine a study.

22 A Bias can do terrible things to a study.

23 Q Right.

24 A Yes. And one thing that I do that may not  
25 be listed, although Bradford Hill discussed it, I don't think it

1 Q And do I take it that in all of these  
2 studies considered -- well, let me stop. I -- I may be  
3 overgeneralizing here.

4 How many -- did you consider the studies  
5 in this long list of things that Dr. Levy proposed you read if  
6 you hadn't already read them and the ones they sent you that you  
7 read maybe you'd already read them? And then all the other ones  
8 you selected to read, did you consider these as any separate  
9 groups to apply the Bradford Hill criteria to or did you take  
10 the whole mass and apply the Bradford Hill -- what did you say,  
11 guidelines?

12 A Yes, sir.

13 Q The -- the Bradford Hill guidelines.

14 MR. DAVIS: Object to the question. It's  
15 overbroad.

16 THE WITNESS: Yeah. And it's hard to  
17 understand too.

18 BY MR. SANDERS:

19 Q Okay. Then I should ask it again with  
20 different words.

21 A Please.

22 Q Did you divide up the studies or reports  
23 or articles into groups to which you would apply the Bradford  
24 Hill guidelines?

25 A Yes, I -- and -- and that's sort of laid

1 was a criteria, and that was to evaluate the extent to which a  
2 particular study or a group study tried to deal with biases that  
3 we commonly think are important. Such as confounding, which is  
4 mentioned in my report.

5 Q And confounding would be, for example, a  
6 situation in which you have a health condition that can be  
7 caused by a number of things. And you don't have enough  
8 information to rule in or rule out all of those things.

9 A Yes and no. That's -- that's -- it would  
10 be -- that there are conditions under which confounding can  
11 occur. And, yes, one of those conditions you mentioned is that  
12 the confounder or -- or candidate for a confounder is associated  
13 independently with disease. But it also needs to be associated  
14 with the exposure. And it cannot be an intermediate in the  
15 causal chain between the exposure and the disease. So as long  
16 as it meets those three criteria again then it's a potential --  
17 potential confounder that would change the results of the study  
18 or alter or -- or bias the results of a study.

19 Q Okay. And -- and -- and as I'm now  
20 understanding what your report is saying as you've explained it  
21 to me, you are basically applying the Bradford Hill criteria to  
22 a -- a number of the studies taken together --

23 A Correct.

24 Q -- as opposed to study by study by study.

25 A Correct.

1 out in the structure here. I looked at studies that dealt with  
2 one outcome and one exposure. For example, particulate matter  
3 in chronic obstructive pulmonary disease. They would not be  
4 mixed with studies of arsenic and lung cancer. I mean, they  
5 just don't mix those.

6 Q All right. So you took the arsenic  
7 studies, put them together, applied the Bradford -- or  
8 considered them together and applied the Bradford Hill criteria?

9 A No, sir, I did not -- only separate  
10 studies according to exposure. But within that exposure I  
11 looked at the separate -- the individual relationship, between  
12 one exposure and one outcome. That has to be the overall group  
13 of studies that you apply the Bradford Hill criteria to,  
14 Guidelines to.

15 Q I may be the only one in the room that  
16 doesn't understand that. But I don't.

17 A Okay.

18 MR. DAVIS: Why don't you be specific?  
19 Ask a specific --

20 THE WITNESS: Okay.

21 BY MR. SANDERS:

22 Q Yeah. Why don't you give me a good  
23 example.

24 A Particulates -- particulates and chronic  
25 obstructive pulmonary disease would be separated from

1 particulates and lung cancer because even though it's the same  
2 exposure, particulates, it's looking at a different outcome,  
3 Likewise, if it's the same outcome, particulates and chronic  
4 obstructive pulmonary disease, cadmium and chronic obstructive  
5 pulmonary disease, they would be separated. Because even though  
6 it's the same disease, different exposure. So they're separated  
7 according to exposure and outcome. So that the group of studies  
8 deal only with one relationship between one exposure and one  
9 outcome. Does that make sense?

10 Q I suppose. I now understand what you're  
11 saying, though.

12 A Okay.

13 Q And so every time you have one of those  
14 pairings, exposure and outcome --

15 A Yes, Yes.

16 Q -- you collect all the studies for that  
17 exposure and outcome and you apply the Bradford Hill criteria to  
18 all of that for that one exposure and that one outcome, is that  
19 what you're saying?

20 A Yes, sir.

21 Q And I do take it from your conclusions  
22 that each and every grouping, as you've described it, you  
23 applied the Bradford Hill criteria; is that right?

24 A Yes.

25 Q And then for each of those you necessarily

1 Ruhl and Vengosh --

2 Q Yes.

3 A -- et al, where they looked at  
4 constituents of certain chemicals or compounds contained in the  
5 coal ash from the Kingston spill. Is that what you're asking  
6 me?

7 Q Right. Right. That's what I'm asking you  
8 about. It's -- it's -- well, just mark it. Lucky number 13.  
9 Fourteen. Sorry. I did my best.

10 (EXHIBIT NO. 14 WAS FILED.)

11 BY MR. SANDERS:

12 Q If you -- if you start on page one of  
13 Exhibit 14, there -- there's a discussion of the analytical  
14 methods and materials as well as an introduction. And then they  
15 go to results and discussion. And the first is coal ash and  
16 sediments, right?

17 A Are you referring to table one or are you  
18 referring to the -- to the discussion on the first page under  
19 "analytical methods and materials" or "results and discussion"  
20 on the first page?

21 Q The "results and discussion" on the first  
22 page.

23 A "A comparison of the chemical  
24 composition" --

25 Q No. I didn't ask you to read it. It

1 checked off the biological plausibility box.

2 A Yes.

3 Q Okay. Well, let me ask you specifically  
4 about the fly ash studies from Kingston --

5 A Yes.

6 Q -- okay? And the ones that come to mind,  
7 at least to me, that I remember, are involving Ruhl and Vengosh  
8 or Vengauche?

9 A Yes.

10 Q How do you pronounce it?

11 A I say Vengosh. But I don't know.

12 Q Okay. You haven't talked to him.

13 A No, sir.

14 Q Doctor Vengosh?

15 A Doctor Vengosh.

16 Q What kind of exposures did those studies  
17 or papers investigate with respect to fly ash in Kingston?

18 MR. DAVIS: Object to the question.

19 Because it's vague. Doesn't refer specifically to a  
20 specific study.

21 BY MR. SANDERS:

22 Q Do you need a specific study identified or  
23 do you know -- do you know those studies well enough to know  
24 what I'm asking you?

25 A You're -- you're talking about a study by

1 starts -- are you with me?

2 A Okay.

3 Q The first is they looked at coal ash and  
4 sediments, right?

5 A I don't see that.

6 Q Well, that's what the title is.

7 A Oh. Oh, oh, the title, yeah. But the  
8 first thing they talk about is -- looks like calcium. But,  
9 yeah, I didn't -- I wasn't reading the title. I'm sorry. Yeah.

10 Q Let me see your copy. Are we looking at  
11 the same thing here, doctor?

12 MR. DAVIS: We'll stipulate that the  
13 article says what it says.

14 MR. ISAAC SANDERS: Well, there were two  
15 articles. I think he wanted -- one of them didn't  
16 deal --

17 THE WITNESS: Yeah. There -- there is a  
18 subheading that says coal ash and sediments.

19 BY MR. SANDERS:

20 Q Right.

21 A Okay?

22 Q And -- and do you understand -- and then  
23 the next one seems to be water contamination, correct?

24 A Okay. That's not -- yeah. I wasn't  
25 concluding that in text. I was -- that's that subheading. Yes.

1 water contamination. Correct.

2 Q And then there's a section called  
3 "potential impacts" -- "environmental impacts." Sorry.

4 A Yes.

5 Q That's on page -- hard to read on my copy.

6 A That looks like --

7 Q It's been stamped over.

8 MR. DAVIS: It's in there.

9 BY MR. SANDERS:

10 Q If you look at the bottom line on that  
11 page, it's page six of nine, is the one I'm reading from.

12 A Potential environmental impacts, is that

13 --

14 Q Yes, sir. You with me?

15 A Yes, I am.

16 Q And then it goes to potential health  
17 impacts.

18 A Yes.

19 Q And is there -- does this survey -- this  
20 is really a survey of the potential environmental and health  
21 impacts in the immediate aftermath of the coal ash spill in  
22 Kingston, Tennessee, right?

23 A Potential, yeah.

24 Q Okay. And -- and do the authors discuss  
25 potential impacts from airborne exposure to fly ash?

1 on page seven of nine --

2 A Okay.

3 Q -- there is a sentence beginning with "it  
4 is important to underscore."

5 A Yes.

6 Q Do you see that?

7 A I see it, uh-huh.

8 Q Read that for me out loud.

9 A Sure. "It is important to underscore the  
10 fact that at this time it is not possible to estimate the health  
11 impacts of CCP ash resuspended particulates due to a lack of  
12 information on the rate at which they are entrained into the  
13 atmosphere as well as their chemical, physical and synergistic  
14 properties linked to morbidity and mortality."

15 Q Keep going.

16 A Okay. "Clearly future studies are needed  
17 linking ambient element and radionuclide concentrations with  
18 ground level CCP ash characteristics, ambient meteorological  
19 characteristics and human population exposure."

20 Q Did they do that? Did they have follow-up  
21 studies to do that that you know of?

22 A When you say "they," do you mean this  
23 group?

24 Q Yes, this group.

25 A Not that I know of.

1 MR. DAVIS: Did you mean health impacts?

2 MR. SANDERS: Yes.

3 MR. DAVIS: Okay.

4 BY MR. SANDERS:

5 Q If you look at page seven of nine, as they  
6 go into potential health impacts --

7 A Do you want me to skip ahead to those two  
8 pages?

9 Q Yeah. I think -- I think that will  
10 shorten things down. But I don't want to keep you from looking  
11 at something important.

12 A No. I -- I don't want to keep you either.

13 So I may have to go back to these.

14 Q Well, at the top of that page -- are you  
15 with me --

16 A I'm on page seven of nine.

17 Q Right. The first sentence starts out, "It  
18 is well-known that windblown dust can travel long distances, as  
19 exemplified by Asian dust storms that result in transport to  
20 locations as far away as the US."

21 A I see that.

22 Q Do you remember that now?

23 A Yeah. Yeah.

24 Q Okay. And if you look at the paragraph  
25 that ends about the third of the way down on the second column

1 Q Okay. Do you know of any group --

2 A Not with --

3 Q -- that did this?

4 A Not with this ash spill in particular, no.

5 Q Do you agree with this qualification on  
6 this study?

7 A I don't have any -- I don't have any major  
8 objections to what they're saying.

9 Q Well, do you have any basis for  
10 disagreeing with it?

11 A Well, no, not -- no. I have no -- no  
12 factual basis in terms of -- resuspended -- you know, there's --  
13 particulates have not been studied in terms of the things that  
14 they say that they need to study. I'm not aware of this group  
15 with this -- whoever -- that addressed this particular issue in  
16 this particular case.

17 Q You didn't read this article?

18 A I'm not -- I'm sorry. How -- how did you

19 --

20 Q Did you read this article?

21 A Yes.

22 Q Okay.

23 A But I'm --

24 Q I didn't understand your question, then.  
25 Your comment. Your comment.



1 A My comment was I'm reiterating what I  
2 answered earlier, that I -- I don't see where they have done  
3 this, which would have been helpful. And there are unknowns  
4 that they have identified.

5 Q Do you -- do you know of -- of anybody --  
6 and I've kind of asked you this, but I want to maybe make it  
7 broader -- of anybody who has done this kind of future study  
8 with respect to fly ash such as what we had and have at  
9 Kingston, resuspended particles.

10 MR. DAVIS: Object to the question. It's  
11 not --

12 BY MR. SANDERS:

13 Q If you understand it, please answer. He's  
14 not telling you you don't answer. He's just objecting.

15 MR. DAVIS: You may answer. But I don't  
16 know what he's asking you.

17 THE WITNESS: I mean, there have been  
18 other spills where they have looked at things that  
19 were not looked at here. But I know resuspended  
20 particles -- I'm not aware of the study of those as  
21 it relates to constituents and human health  
22 consequences.

23 BY MR. SANDERS:

24 Q What are resuspended particles of fly ash?

25 A Apparently -- and I'm just going by their

1 MR. DAVIS: Objection. Overbroad and  
2 confusing.

3 BY MR. SANDERS:

4 Q Am I right?

5 A That's my understanding.

6 Q Mine too.

7 Are there any other studies of fly ash  
8 first, that you're aware of, coal fly ash, regarding health  
9 effects from, in particular, airborne exposure?

10 A No.

11 Q No. Okay. And -- and I'm sure I know the  
12 answer to this but I'm going to answer it -- ask it in the  
13 language of Ruhl and Vengosh, et al.

14 A Uh-huh.

15 Q Do you know of any studies of resuspended  
16 fly ash particles and human health effects?

17 A No.

18 Q Doctor Terry, do you -- do you know --  
19 actually know -- whether the heavy metals that you have  
20 identified in your report of issues of concern actually comes  
21 unbound from the fly ash particles?

22 MR. DAVIS: Objection to the general vague  
23 question.

24 THE WITNESS: It is vague. It is a vague  
25 question.

1 definition here -- of course, I'm on the wrong page. My  
2 understanding, they don't really define it here in this section  
3 that you gave me to read. But my understanding, it's particles  
4 that are more permanently suspended in the atmosphere.

5 Q Well, go back to -- to -- to the very  
6 first sentence. And I caused this, and I'm sorry. I had you  
7 starting on page seven. But if you read the sentence that  
8 begins on page six, under "potential health impacts." "Of  
9 particular concern to human health is the wind-blown  
10 resuspension of fly ash into the atmosphere."

11 A Yeah.

12 Q What does that mean?

13 A It means that ash is taken from the ground  
14 and suspended up -- up into the atmosphere by air currents.

15 Q Let's try it this way. I'm a simple guy.  
16 What are they -- is what they are talking about that the -- for  
17 example, in this -- in this tragedy where this dike burst,  
18 dredge cell burst, gives way, all of this ash goes flowing into  
19 the river and they had to go dredge it all up and pile it up in  
20 order to clean it up, right?

21 A Uh-huh.

22 Q And once it gets put out there and  
23 weathers and what not, it dries out, and the wind blows and  
24 these ash particles are resuspended into the air. Is that what  
25 it's talking about?

1 BY MR. SANDERS:

2 Q Well, we talked a little bit earlier about  
3 the -- the -- do you -- do you agree that -- that in their  
4 natural state fly ash particles bind up these constituent  
5 elements?

6 MR. DAVIS: Objection. It's still general  
7 and vague.

8 BY MR. SANDERS:

9 Q Or do you know?

10 A It's very general and vague.

11 Q But do you know? Do you know enough to  
12 answer the question?

13 MR. DAVIS: Objection. Same objection.

14 THE WITNESS: It's too vague.

15 BY MR. SANDERS:

16 Q Okay. Let's take arsenic as an example.

17 Where is the arsenic in fly ash? Is it not in the particles?

18 A It's on and in the particles, yes.

19 Q Okay. And is it -- if you know, is it  
20 bound in the particles? Bound to the particles of the fly ash.

21 MR. DAVIS: Objection. Compound question.

22 THE WITNESS: If there's more than one

23 question there perhaps --

24 BY MR. SANDERS:

25 Q Okay. Do you know if the arsenic

1 constituent element is bound to the fly ash particles in a  
2 chemical way.

3 A I know that -- I don't know how bound it  
4 is. I know that concern for exposure to arsenic in water, for  
5 example, after a coal ash spill is -- is -- that it's -- it can  
6 -- it can -- it's biologically active. I mean, I guess what  
7 you're getting at, is it inert. And it's -- but, again, it's --  
8 it's -- it's kind of vague for me. We can go through the --

9 Q Well, I'm trying to get at how you checked  
10 off the biological plausibility box for this group of fly ash  
11 articles or this -- this fly ash article.

12 MR. DAVIS: For all of them or just  
13 arsenic?

14 MR. SANDERS: Uh?

15 MR. DAVIS: For all of his report or  
16 just --

17 MR. SANDERS: Well, let's take arsenic as  
18 an example.

19 MR. DAVIS: Arsenic and what?

20 BY MR. SANDERS:

21 Q Whatever health issue you were looking at  
22 associated with arsenic.

23 A Okay. I always went to the literature.

24 Always. I did not conduct any experiments on my own.

25 MR. SANDERS: Right. Okay. Let's take

1 itself.

2 THE WITNESS: Yes.

3 BY MR. SANDERS:

4 Q Okay. Did you include in any of your  
5 groups to which you applied the Bradford Hill criteria articles  
6 such as these on fly ash?

7 A Yes.

8 Q Okay. And what did you conclude -- did  
9 you find or did you -- do you have an opinion that fly ash  
10 exposure as opposed to exposure to constituent elements of fly  
11 ash caused any of these medical conditions in this case? Do you  
12 find an association?

13 A The data are consistent in several  
14 instances with a -- with there being a causal association.

15 Q Between fly ash and the health conditions  
16 or constituent elements and the --

17 A Constituent elements.

18 Q But not the fly ash.

19 A There's not been that many studies in  
20 order to apply the Bradford Hill criteria.

21 Q Okay. And -- and -- and -- so is it your  
22 testimony, and will it be your testimony at trial, that the  
23 review that you have done does not permit you to do the  
24 association between fly ash exposure and these medical  
25 conditions in this case as contrasted with the association

1 a short break.

2 MR. DAVIS: Okay.

3 THE VIDEOGRAPHER: Going off the record.

4 The time is 3:47.

5 (A recess was had.)

6 THE VIDEOGRAPHER: We're going back on the  
7 record. The time is 3:55.

8 BY MR. SANDERS:

9 Q Do you even remember my last question?

10 A You might want to refresh my memory.

11 Q I'm -- I'm -- I'm going to try to go at it  
12 a different way. I think, and it's certainly been confirmed by  
13 my able colleague here, that we are two ships passing in the  
14 night on the way I was trying to ask the questions.

15 A Yeah. That's -- that's what it felt like.

16 Q Okay. We got into this, talking about the  
17 Ruhl Vengosh articles on fly ash, and -- and I was obviously  
18 making the point that they're saying not enough is known to draw  
19 any conclusions, right? More studies are needed, right?

20 MR. DAVIS: Objection. You may answer if  
21 you can.

22 BY MR. SANDERS:

23 Q Is that a fair summary of what you and I  
24 went over?

25 MR. DAVIS: Objection. Article speaks for

1 between constituent elements that you've listed and health  
2 conditions?

3 MR. DAVIS: Objection to the form. You  
4 may answer if you can.

5 THE WITNESS: Yeah, I don't think I would  
6 agree with that.

7 BY MR. SANDERS:

8 Q Why?

9 A Because the exposure to the specific  
10 constituents -- first of all, I'm looking at whether there's  
11 evidence to support a causal association between those  
12 constituents and the outcomes. And if those constituents are  
13 found in the exposure to coal ash then, in -- in essence, I am  
14 saying that exposure to coal ash. If you're saying that -- if  
15 you're asking whether there's -- if you can separate the  
16 constituents from coal ash and everything that remains after you  
17 separate those constituents from coal ash, whether there would  
18 be an association, I would say it's almost irrelevant because  
19 the coal ash happens to contain I snows go Ray indication, for  
20 example. And what -- to -- to some extent what practical way  
21 can you separate ionizing radiation from another source and from  
22 ionizing radiation from another source, you know. It's -- and  
23 then you wouldn't say, well, ionizing radiation from an X-ray  
24 machine is one thing or you can't then talk about ionizing  
25 radiation when it comes from, let's say, a nuclear contamination

1 of some kind. I mean, I don't think that you can be so clear to  
2 separate a -- a substance that's made up of constituents from  
3 the constituents themselves. In other words, I -- I sort of  
4 understand what you're getting at, but I don't necessarily agree  
5 with it.

6 Q Well, are you intending to offer an  
7 opinion that the levels or concentrations of any of these  
8 constituent elements are particular substances that were present  
9 in the fly ash at Kingston were sufficient to cause the health  
10 conditions you have described?

11 A Sufficient.

12 MR. DAVIS: Objection to the term.

13 THE WITNESS: Yeah. I don't know  
14 sufficient. But what I'm planning to do is talk  
15 about the data from articles that looked at the  
16 constituents of the coal ash. And then if there are  
17 data that are pertinent to the bioavailability of  
18 those constituents, I will certainly talk about that.  
19 And in conjunction with what other occupational  
20 exposures related to that -- those constituents have  
21 shown in epidemiologic studies, I think they need to  
22 all be looked at as a whole rather than  
23 compartmentalize too much. For example -- yeah.

24 BY MR. SANDERS:

25 Q Well, look, let -- let me -- let me get it

1 in fly ash are bioavailable.

2 A I'm not making that assumption. I am  
3 following the determinations of these agencies. I did not go  
4 into this with an assumption of that kind. I had --

5 Q And do these studies address specifically  
6 airborne fly ash?

7 A To the -- to what extent -- they --  
8 they -- they address concerns of exposure to fly ash. As far as  
9 airborne versus other forms of exposure, I would need to go back  
10 and look to see to what extent they differentiated between them.  
11 And I'm happy to do that.

12 Q And -- and -- and -- and you should.  
13 But -- but as of right now you don't know.

14 MR. DAVIS: Objection. I mean, it's in  
15 his report.

16 MR. SANDERS: Counsel, that's coaching.

17 MR. DAVIS: Well, I'm just saying.

18 MR. SANDERS: Don't, counsel. That's  
19 coaching.

20 MR. DAVIS: Okay. I won't do that  
21 anymore. But you need to properly characterize his  
22 testimony.

23 MR. SANDERS: Counsel, you've been  
24 violating the Ruhl there, and you admit it, and now  
25 you're lecturing me on what I should do?

1 at this way. You have gone to great lengths to look at the  
2 literature with respect to associations between health  
3 conditions and each of these listed constituent elements.

4 A Yes, sir.

5 Q And what I -- what I'm asking you is, have  
6 you seen any studies that say that these constituent elements in  
7 fly ash in fact do get into the body and cause harm if you're  
8 looking at airborne exposure first?

9 MR. DAVIS: Objection to the general  
10 question. It's vague. Overbroad.

11 BY MR. SANDERS:

12 Q You can answer.

13 A Well, I've -- I've -- in my report I've  
14 looked at -- for example, page 16. Otherwise known as page 24  
15 of 139.

16 Q I'm with you.

17 A Yeah. But, yes, this is -- this is  
18 literature that I obtained and read in my attempt to look at the  
19 issue of bioavailability. And in this case we're looking at  
20 determinations made by government agencies who also, by the way,  
21 as you know, rely on individual studies. And not only their  
22 own, but on -- on external studies. And, therefore, consistent  
23 with these agencies, it would be difficult for me to separate  
24 constituents from the source of the constituents.

25 Q So you're assuming that the constituents

1 MR. DAVIS: Yes.

2 MR. SANDERS: That doesn't sound right.

3 MR. DAVIS: Well, if you'd ask a proper  
4 question then we won't have an objection.

5 MR. SANDERS: We're not talking about  
6 objecting. We're talking about coaching.

7 MR. DAVIS: Ask a question.

8 MR. SANDERS: Quit coaching.

9 MR. DAVIS: Ask a question.

10 BY MR. SANDERS:

11 Q Do you remember the question?

12 A I think you may have to restate it.

13 MR. SANDERS: Can you restate my question,  
14 please?

15 (The pending question was read by the  
16 court reporter.)

17 BY MR. SANDERS:

18 Q That's the question.

19 MR. DAVIS: I thought he answered that.

20 THE WITNESS: I'm sorry?

21 MR. DAVIS: I thought he answered that one  
22 and then there was a follow-up.

23 BY MR. SANDERS:

24 Q Do they?

25 A In my report, I do -- I talk about concern